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EXAMINER

WOO, RICHARD SUKYOON

ART UNIT	PAPER NUMBER
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3629

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/667,235

Applicant(s)

BAGGETT ET AL.

Examiner

Richard Woo

Art Unit

3629

mw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-64 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 1-63 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 1, line 18; and Claim 63, line 16, respectively, the recitation of "the client" lacks antecedent basis.

Claim Rejections - 35 USC § 102

- 3) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- 4) Claims 1-4, 7-9, 14-16, 22, 25-27, 37, 43-53, 55, 58, 59, 63 and 64, as far as Claims 1-63 are definite, are rejected under 35 U.S.C. 102(e) as being anticipated by DeMarcken et al. (WO 00/46715 A).

Art Unit: 3629

W.R.T. Claim 1:

DeMarcken et al. discloses a method comprising the steps of:

receiving a first request from a first requestor for airline availability information (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32; and see Figs.);

querying one or more airline availability information sources for the requested airline availability information (see Id.);

receiving the requested airline availability information from the one or more airline availability information sources (see Id.);

caching the received airline information;

providing the received information to the requestor;

receiving a second query from a second requestor for the information (see Supra);

and

determining to provide the second requestor with at least one of the following: real-time information, and cached information; and

providing information to the requestor (e.g., see Fig. 9).

W.R.T. Claim 2: DeMarcken et al. further discloses the method including: monitoring airline availability information traffic between an airline availability information source and one or more clients of the source (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32); and caching at least a portion of the monitored airline information.

W.R.T. Claim 3: DeMarcken et al. further discloses the method including: proactively generating one or more queries independent of requestor queries;

 sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom (see Id.).

W.R.T. Claim 4: DeMarcken et al. further discloses the method including: monitoring airline availability information traffic between an airline availability information source and one or more clients of the source (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32); caching at least a portion of the monitored airline information; proactively generating one or more queries independent of requestor queries; sending the one or more proactively generated queries to an airline availability information source and caching information returned therefrom (see Id.).

W.R.T. Claim 7: DeMarcken et al. further discloses the method including: proactively generating queries to populate cache (see Supra).

W.R.T. Claim 8: DeMarcken et al. further discloses the method including: proactively generating queries to update cached information (see Id.);

W.R.T. Claim 9: DeMarcken et al. further discloses the method including: ordering the proactive queries for processing based on time-to-departures and age of associated cached information (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32);

W.R.T. Claim 14: DeMarcken et al. further discloses the method including: receiving a second requestor preference for real-time information (or cached) ; and

determining to provide the second requestor with real-time information (or cached) based at least in part on the second requestor preference (see *Id.*);

W.R.T. Claim 15: DeMarcken et al. further discloses the method wherein the step of determining step is based at least in part on one or more of the following: an availability of requested information in cache; a currently cached flight availability count; a client preference for cached/ real-time data; an age of the cached information; a client ID; a time; (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32);

W.R.T. Claim 16: DeMarcken et al. further discloses the method including: querying one or more information sources through one or more proxies (see *Id.*);

W.R.T. Claim 22: DeMarcken et al. further discloses the method including: receiving a first request from a first requestor for one or more of the following: hotel availability, rental car availability, taxi, entertainment, and restaurant availability (see *Id.*).

W.R.T. Claim 25: DeMarcken et al. further discloses the method including: caching recently updated information separately from less recently updated information and searching the recently updated cached information when real-time data is sought (see *Supra*).

W.R.T. Claim 26: DeMarcken et al. further discloses the method including: permitting the requestors to specify approximate departure times; and searching a cache for requested information .

W.R.T. Claim 27: DeMarcken et al. further discloses the method including: rounding-up actual departure times for each flight, providing at least the rounded-up actual departure

Art Unit: 3629

time to a hashing function, and storing information associated with the flights in a hash table based on resulting rounded-up hash table indexes (page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32); rounding-down actual departure time for each flight, providing at least the rounded-down actual departure time to the hashing function, and storing information associated with the flights in the hash table based on resulting rounded-down hash table indexes; W.R.T. Claim 37: DeMarcken et al. further discloses the method including: sending the one or more proactively generated queries periods of low information source activity (see Id.);

W.R.T. Claim 43: DeMarcken et al. further discloses the method including: assigning priority to queries according to an associated market (see Supra);

W.R.T. Claim 44: DeMarcken et al. further discloses the method including: assigning priority to queries according to a frequency of flights (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32);

W.R.T. Claim 45: DeMarcken et al. further discloses the method including: assigning priority to queries according to a frequency of changes associated with availability of corresponding flights (see Id.);

W.R.T. Claim 46: DeMarcken et al. further discloses the method including: assigning priority to queries according to a market importance (see Id.);

W.R.T. Claim 47: DeMarcken et al. further discloses the method including: assigning priority to queries according to nearness of departure time (see abstract; page 7, lines

Art Unit: 3629

1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32);

W.R.T. Claim 48: DeMarcken et al. further discloses the method including: assigning priority to queries according to an age of cached data (see Supra);

W.R.T. Claim 49: DeMarcken et al. further discloses the method including: assigning priority to queries according to a number of remaining available seats (see Id.);

W.R.T. Claim 50: DeMarcken et al. further discloses the method including: assigning priority to queries according to anticipated increases in travel volume (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32);

W.R.T. Claim 51: DeMarcken et al. further discloses the method including: assigning priority to queries according to a type of product/service (see Id.);

W.R.T. Claim 52: DeMarcken et al. further discloses the method including: assigning lower priority to forms of ground transportation (see Id.);

W.R.T. Claim 53: DeMarcken et al. further discloses the method including: assigning lower priority to flights that use propeller planes (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32);

W.R.T. Claim 55: DeMarcken et al. further discloses the method including: updating cached airline availability information according to multiple priorities (see Id.);

W.R.T. Claim 58: DeMarcken et al. further discloses the method including: predicting an availability status (see Id.); and

Art Unit: 3629

W.R.T. Claim 59: DeMarcken et al. further discloses the method including: predicting availability status based on prior observed variables, including prior availability information (page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32).

W.R.T. Claim 63:

DeMarcken et al. discloses the method comprising the steps of:

- receiving a first request from a first requestor;
- querying one or more information sources for the requested information;
- receiving the requested information from the source;
- caching the received information;
- providing the information to the requestor;
- receiving the second query from a second requestor;
- determining to provide the second requestor with at least one or the following types of information (real-time and cached information);
- providing information to the requestor in accordance with the determination (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32).

W.R.T. Claim 64:

DeMarcken et al. discloses a computer program product including:

- a receiving function that causes the system to receive requests for

Art Unit: 3629

information from requestors;

a query process function that causes the system to determine whether to process a query out-of-cache or with real-time information, and that causes the system to query one or more information sources when it determines to process a query with real-time information; and

a cache control function that causes the system to cache information returned from the sources (see abstract; page 7, lines 1-28; page 9, line 19 - page 12, line 3; page 12, line 32 - page 13, line 34; page 15, line 16 - page 15, line 32).

Claim Rejections - 35 USC § 103

5) Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeMarcken et al. in view of "Using Predictive Prefetching to improve world wide web latency" (Padmanabhan V N et al.).

DeMarcken et al. discloses the invention as cited above but does not specifically disclose the method including: adding the requestor queries to a query priority queue; adding proactively generated queries to the query priority queue, at lower priorities than the requestor queries; and processing the requestor queries and the proactively generated queries according to their priorities.

Padmanabhan V N et al. teaches for a method for interfacing between a plurality of requestors and sources, including: adding the requestor queries to a query priority

Art Unit: 3629

queue; adding proactively generated queries to the query priority queue, at lower priorities than the requestor queries; and processing the requestor queries and the proactively generated queries according to their priorities (see abstract; page 26, line 4 - page 26, line 14; page 29, line 33 - page 30, line 11; and page 34, line 18 - page 35, line 7).

It would have been obvious to include the steps of: adding the requestor queries to a query priority queue; adding proactively generated queries to the query priority queue, at lower priorities than the requestor queries; and processing the requestor queries and the proactively generated queries according to their priorities, as taught by Padmanabhan V N et al., for the purpose of providing a substantial reduction in latency perceived by a requestor in terms of the average time to access a file.

Allowable Subject Matter

6) Claims 6, 10-13, 17-21, 23-24, 28-36, 38-42, 54, 56-57, 60-62 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

7) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

WO 00/43927 is cited to show a reservation system and method that all changes to a database in a federation are reliably and immediately communicated to all of the other database in federation. The system communicates information concerning hotel reservation transactions.


"Link Prediction and Path Analysis Using Markov Chains" is cited to show the Markov chains that allow the system to dynamically model the URL access patterns that are observed in navigation logs based on the previous state.


"Using path profiles to predict HTTP requests" is cited to show the prediction of request behavior using path profiles with high enough probability to justify generating dynamic content before the client request it.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Woo whose telephone number is 703-308-7830. The examiner can normally be reached on Monday-Friday from 8:30 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 703-308-2702. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.


Richard Woo
Patent Examiner
GAU 3629
March 19, 2004


JOHN G. WEISS
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